

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-18 are pending, with claims 1-6, 17 and 18 amended by the present amendment. Claims 1, 6 and 17 are independent.

Claims 1-18 are rejected under 35 U.S.C. § 112, second paragraph; claims 1-2, 6-10, 15 and 17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby (EP 0589724, Applicant's disclosed related art) in view of Liu (U.S. Patent No. 7,302,118); claims 3, 11 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby, Liu and Patton (U.S. Patent 6,795,209); claims 4 and 12-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby, Liu and Zhou (U.S. Pub. No. 2002/0015447); and claims 5 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby, Liu and Baggs (U.S. Pub. No. 2003/0231801).

Applicant traverses the rejection under 35 U.S.C. § 112, second paragraph. Applicant notes that the term "directly" is a commonly used patent claim term, and that one skilled in the art would understand the term to mean "without any intervening step or process." Thus, one skilled in the art would know that the terms directed to extracting data encoding the preview image directly from the stream of data would preclude extracting data encoding the preview image indirectly from the stream of data (e.g., from a file received from a stream and then stored.)

Briefly recapitulating, claim 1 is directed to

An image scanning and processing system, comprising:

a scanner configured to generate a stream of data encoding a scanned image;

a controller configured to control and process data received from the scanner; and

a file storage device configured to store a master file including data from the stream of data,

wherein the controller is configured to create a preview image with a lower data size than the scanned image from at least part of the data encoding the scanned image, wherein the controller is further configured to extract data encoding the preview image directly from the stream of data, and to write the extracted data to a thumbnail file in order to create the preview image.

Claims 6 and 17 recite, *inter alia*, “data encoding the preview image is extracted directly from the stream of data, and written to a thumbnail file in order to create the preview image.”

As noted in paragraph 005 of Applicant’s originally filed specification, in Searby, an initial high-resolution image is held in a high capacity storing unit. The system comprises a small capacity high speed storing unit and is arranged to transfer portions of the initial high-resolution image to the small capacity high speed storing unit a portion at a time. The system of Searby also includes a viewing store for storing data representing an image to be displayed and a monitor for displaying the image. The system of Searby is arranged to operate in a preview mode. In this preview mode, image data is down converted and written to a destination area for output to the viewing store. The down-conversion of the data is performed by the control processor.

As noted in paragraph 006 of Applicant’s originally filed specification, in Searby, if an operator wishes to select a section from the scanned image, a preview image of the entire scanned image would have to be created first. This requires processing of all the data comprised in the master file. From a display of the preview image, the user would be able to select a section of the scanned image. This could then be retrieved from the master file for display. But, such a

process is time consuming and strains the processing capacity of the controller and its memory to the utmost. Additionally, if one wanted to check a second area, the whole process would have to be repeated again, rendering the system to be rather inefficient.

However, as acknowledged by the Official Action, Searby does not disclose or suggest the ability to extract data encoding the preview image directly from the stream of data. To cure this deficiency, the Official Action applies Liu.

Liu describes a method for transforming a digital image including a main image and associated metadata in accordance with a parameter. The method includes checking a compression tag contained in the metadata of the digital image, wherein the digital image is obtained from a file stored in the Exchangeable Image File ("EXIF") format, to determine whether a thumbnail image contained in the metadata of the digital image is in a compressed JPEG format. The metadata may include a thumbnail. Liu notes that if the main image is processed and the metadata (e.g., the thumbnail) remains unaltered. Thus, Liu provides a method for updating the metadata (e.g., the thumbnail) to reflect the transformation of the main image.

As a first point of order, Applicant submits that the Official Action does not provide a rational reason for combining the teachings of Liu and Searby. That is, Liu is aimed at updating a thumbnail that is stored in a memory to reflect a post-receipt processing of the main image, whereas Searby is aimed at preview image creation. Applicant submits that one skilled in the art, and facing the issues of Searby, would have no reason to consider the post-receipt processing of Liu.

Next, contrary to the Official Action, Liu does not disclose or suggest extracting data encoding the preview image directly from the stream of data. That is, EXIF stream 220 of Liu contains at least one digital image in the format illustrated in Fig. 2, having a main image 204, simple metadata 206 and complex metadata 208, such as a thumbnail image or audio data. Thus, in Liu any data associated with a preview image is first stored and then extracted and processed, whereas in Applicant's claimed invention, the data encoding the preview image is extracted directly (i.e., without a preceding storing step) from the stream of data.

Furthermore, Liu does not disclose or suggest extracting data encoding the preview image *written to a thumbnail file in order to create the preview image*. That is, in Liu the thumbnail pre-exists within the metadata and is stored in memory for image processing, whereas in Applicant's claimed invention the thumbnail file is created directly from the stream of data.

Applicant has considered the remaining references and submits that the remaining references do not cure the deficiencies of Scarby and Liu. As none of the cited art, individually or in combination, discloses or suggests at least the above-noted features of independent claims 1, 6 and 17, Applicant submits the inventions defined by claims 1, 6 and 17, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.¹

Turning now to dependent claim 9, Applicant notes that no grounds of rejection are provided for this claim. Thus, Applicant submits that a *prima facie* case of obviousness has not been presented, and that claim 9 patentably defines over the applied references. Additionally, the opening sentence of paragraph 9 of the Official Action indicates that claims 1-2 and 6-10 are

rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby and Liu. However, subsequent paragraphs indicate that claims 15 and 17 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby and Liu.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael E. Monaco, Reg. No. 52,041, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

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¹ MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest all the claim limitations.